

CLAIMS

What is claimed is:

- 1 1. An apparatus comprising:
2 a metal deposition tool having annealing capability.
- 1 2. The apparatus of claim 1 further comprising an annealing chamber on said metal
2 deposition tool.
- 1 3. The apparatus of claim 2 wherein said metal deposition tool is an electroplating
2 tool.
- 1 4. The apparatus of claim 2 wherein said metal deposition tool is a chemical vapor
2 deposition (CVD) tool.
- 1 5. The apparatus of claim 1 wherein said metal deposition tool has a plurality of metal
2 deposition chambers, said metal deposition tool being modified to replace one of said
3 metal deposition chambers with an annealing chamber.
- 1 6. The apparatus of claim 5 wherein said metal deposition tool is an electroplating
2 tool and said metal deposition chamber is an electroplating chamber.

1 7. The apparatus of claim 5 wherein said metal deposition tool is a chemical vapor
2 deposition (CVD) tool and said metal deposition chamber is a chemical vapor deposition
3 (CVD) chamber.

1 8. The apparatus of claim 1 wherein said metal deposition tool includes at least one
2 metal deposition chamber and an annealing chamber on said metal deposition tool.

1 9. The apparatus of claim 8 wherein said metal deposition tool is an electroplating tool
2 and said metal deposition chamber is an electroplating chamber.

1 10. The apparatus of claim 8 wherein said metal deposition tool is a chemical vapor
2 deposition (CVD) tool and said metal deposition chamber is a chemical vapor deposition
3 (CVD) chamber.

1 11. The apparatus of claim 8 wherein said annealing chamber includes heat lamps.

1 12. The apparatus of claim 8 wherein said annealing chamber is a furnace.

1 13. The apparatus of claim 8 further comprising a robot, wherein said robot moves a
2 wafer from said metal deposition chamber to said annealing chamber.

1 14. An apparatus comprising:
2 an chemical mechanical polishing (CMP) tool having annealing capability.

1 15. The apparatus of claim 14 further comprising an annealing chamber on said CMP
2 tool.

1 16. The apparatus of claim 14 wherein said CMP tool has a plurality of CMP platforms,
2 said CMP tool being modified to replace one of said CMP platforms with an annealing
3 chamber.

1 17. The apparatus of claim 14 wherein said CMP tool includes at least one CMP
2 platform and an annealing chamber on said CMP tool.

1 18. The apparatus of claim 14 wherein said annealing chamber includes heat lamps.

1 19. The apparatus of claim 14 wherein said annealing chamber is a furnace.

1 20. The apparatus of claim 14 further comprising a robot, wherein said robot moves a
2 wafer from said annealing chamber to said CMP platform.

1 21. A method comprising:
2 depositing a metal onto a substrate in a metal deposition chamber of a metal
3 deposition tool;
4 moving said substrate from said metal deposition chamber directly to an annealing
5 chamber, wherein said annealing chamber is part of said metal deposition tool; and
6 heating said metal in said annealing chamber.

1 22. The method of claim 21 wherein said metal deposition tool is an electroplating tool
2 and said metal deposition chamber is an electroplating chamber.

1 23. The method of claim 21 wherein said metal deposition tool is a chemical vapor
2 deposition (CVD) tool and said metal deposition chamber is a chemical vapor deposition
3 (CVD) chamber.

1 24. The method of claim 21 wherein said heating is performed before chemical
2 mechanical polishing (CMP) of said substrate is performed.

1 25. A method comprising:
2 depositing a metal onto a substrate in a metal deposition chamber of a metal
3 deposition tool;
4 moving said substrate from said metal deposition tool to an annealing chamber,
5 wherein said annealing chamber is part of a chemical mechanical polishing (CMP) tool;
6 heating said metal in said annealing chamber;
7 moving said substrate from said annealing chamber to a CMP platform on said
8 CMP tool; and
9 polishing said substrate including said metal after said annealing.

1 26. The method of claim 25 wherein said metal deposition tool is an electroplating tool
2 and said metal deposition chamber is an electroplating chamber.

1 27. The method of claim 25 wherein said metal deposition tool is a chemical vapor
2 deposition (CVD) tool and said metal deposition chamber is a chemical vapor deposition
3 (CVD) chamber.

1 28. A method comprising:
2 depositing a metal onto a substrate in a metal deposition chamber of a metal
3 deposition tool;
4 moving said substrate from said metal deposition tool to a chemical mechanical
5 polishing (CMP) platform on a CMP tool;
6 polishing said substrate including said metal;
7 moving said substrate from said CMP platform to an annealing chamber, wherein
8 said annealing chamber is part of said CMP tool; and
9 heating said metal in said annealing chamber.

1 29. The method of claim 28 further comprising heating said metal in an annealing
2 chamber before polishing said substrate including said metal.

1 30. The method of claim 29 wherein said heating said metal in an annealing chamber
2 before polishing said substrate including said metal is performed in said annealing
3 chamber that is part of said CMP tool.